

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents
United States Patent and Trademark
Office
Box PCT
Washington, D.C. 20231
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 28 August 2000 (28.08.00)	Applicant's or agent's file reference
International application No. PCT/BR99/00107	Priority date (day/month/year) 21 December 1998 (21.12.98)
International filing date (day/month/year) 17 December 1999 (17.12.99)	
Applicant DA SILVA, Benedito, Cândido	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:

14 July 2000 (14.07.00)

☐ in a notice effecting later election filed with the International Bureau on:2. The election ☒ was☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

<p>The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland</p> <p>Facsimile No.: (41-22) 740.14.35</p>	<p>Authorized officer</p> <p>Olivia RANAIVOJAONA</p> <p>Telephone No.: (41-22) 338.83.38</p>
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PATENT COOPERATION TREATY

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INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference		FOR FURTHER ACTION	see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.
International application No. PCT/BR 99/00107	International filing date (day/month/year) 17 December 1999 (17.12.99)	(Earliest) Priority Date (day/month/year) 21 December 1998 (21.12.98)	
Applicant DA SILVA, BENEDITO CANDIDO			

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 5 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**
 - a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
 - b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing:
 - ☐ contained in the international application in written form.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority in written form.
 - ☐ furnished subsequently to this Authority in computer readable form.
 - ☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
 - ☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.
2. ☒ Certain claims were found unsearchable (See Box I).
3. ☐ Unity of invention is lacking (See Box II).
4. With regard to the title,
 - ☒ the text is approved as submitted by the applicant.
 - ☐ the text has been established by this Authority to read as follows:
5. With regard to the abstract,
 - ☐ the text is approved as submitted by the applicant.
 - ☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.
6. The figure of the drawings to be published with the abstract is Figure No.: _____
 - ☐ as suggested by the applicant.
 - ☐ because the applicant failed to suggest a figure.
 - ☐ because this figure better characterizes the invention.
 - ☒ None of the figures.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/BR 99/00107

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: (please see remark)
because they relate to subject matter not required to be searched by this Authority, namely:
Remark:
Although the formulation "New utilization of ... in medicine ..." is quite imprecise and might involve therapeutic methods of treatment of the human/animal body, the search has been carried out for all claims and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This international Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/BR 99700107

Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)

The present invention relates to a composition comprising alpha-hydroxypropionic acid linked to any pharmaceutically acceptable vehicle, such as pure serum, 1,2,3-propanetriol, 1,2-propanediol resp. a mixture thereof or optionally a pharmaceutically acceptable catalyzer.

Alpha-hydroxy-propionic acid is used in medicine in many dilutions for the treatment of sinusitis and other upper respiratory diseases.

The present invention is characterized by a formulation adapted to nasal delivery for the treatment of upper respiratory disorders.

INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER

IPC⁷: A61K 31/191, 31/22, 9/08, 9/72International application No.
PCT/BR 99/00107

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC⁷: A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI, PAJ, EPODOC, medline, CAS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JP 62-11649 A (KOWA CO. LTD.) 02 August 1994 (02.08.94) (abstract) World Patent Index [online]. London, U.K.: Derwent Publications, Ltd. [retrieved on 05 April 2000 (05.04.00)]. Retrieved from EPOQUE, Accession No. 1994-283256.	1-4, 6-8, 10
X	JP 63-170323 A (COSMO KAIHATSU KK) 14 July 1988 (14.07.88) (abstract) World Patent Index [online]. London, U.K.: Derwent Publications, Ltd. [retrieved on 05 April 2000 (05.04.00)]. Retrieved from EPOQUE, Accession No. 1998-238135.	1-3, 6-8, 10
X	DE 2721014 A (REITH F.J.) 16 November 1978 (16.11.78), abstract, claims.	1-3, 6-8, 10

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

- * Special categories of cited documents:
- "A" document defining the general state of the art which is not considered to be of particular relevance
 - "E" earlier application or patent but published on or after the international filing date
 - "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
 - "O" document referring to an oral disclosure, use, exhibition or other means
 - "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "Z" document member of the same patent family

Date of the actual completion of the international search

05 April 2000 (05.04.00)

Date of mailing of the international search report

17 April 2000 (17.04.00)

Name and mailing address of the ISA/AT
Austrian Patent Office
Kohlmarkt 8-10; A-1014 Vienna
Facsimile No. 1/53424/200

Authorized officer

Krenn

Telephone No. 1/53424/435

INTERNATIONAL SEARCH REPORT

International application No.
PCT/BR 99/00107

Box I. Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: (please see remark)
because they relate to subject matter not required to be searched by this Authority, namely:
Remark:
Although the formulation "New utilization of ... in medicine ..." is quite imprecise and might involve therapeutic methods of treatment of the human/animal body, the search has been carried out for all claims and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II. Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This international Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/BR 99/00107

Patent document cited in search report			Publication date	Patent family member(s)	Publication date
JP	A2	6211659	02-08-1994	none	
JP	A2	63170323	14-07-1998	none	
DE	A1	2721014	16-11-1978	CH A 638681	14-10-1993
DE	C2	2721014	29-10-1987		

INTERNATIONAL SEARCH REPORT

International application No.
PCT/BR 99/00107

A. CLASSIFICATION OF SUBJECT MATTER

IPC⁷: A61K 31/191, 31/22, 9/08, 9/72

According to International Patent Classification (IPC) or to both national classification and IPC

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IPC⁷: A61K

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X	JP 63-170323 A (COSMO KAIHATSU KK) 14 July 1988 (14.07.88) (abstract) World Patent Index [online]. London, U.K.: Derwent Publications, Ltd. [retrieved on 05 April 2000 (05.04.00)]. Retrieved from EPOQUE, Accession No. 1998-238135.	1-3, 6-8,10
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„E“ earlier application or patent but published on or after the international filing date

„L“ document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

„O“ document referring to an oral disclosure, use, exhibition or other means

„P“ document published prior to the international filing date but later than the priority date claimed

„T“ later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

„X“ document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

„Y“ document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

„&“ document member of the same patent family

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/BR 99/00107

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Although the formulation "New utilization of ... in medicine ..." is quite imprecise and might involve therapeutic methods of treatment of the human/animal body, the search has been carried out for all claims and based on the alleged effects of the compound/composition.
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☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/BR 99/00107

Patent document cited in search report			Publication date	Patent family member(s)		Publication date
JP	A2	6211659	02-08-1994	none		
JP	A2	63170323	14-07-1988	none		
DE	A1	2721014	16-11-1978	CH	A	14-10-1983
DE	C2	2721014	29-10-1987			

PCTWORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁷ : A61K 31/191, 31/22, 9/08, 9/72	A1	(11) International Publication Number: WO 00/37069 (43) International Publication Date: 29 June 2000 (29.06.00)
(21) International Application Number: PCT/BR99/00107 (22) International Filing Date: 17 December 1999 (17.12.99) (30) Priority Data: PI 9805767-7 21 December 1998 (21.12.98) BR (71)(72) Applicant and Inventor: DA SILVA, Benedito, Cândido [BR/BR]; Rua Joaquim Murtinho, 62, Apt. 201, Santo Antônio, CEP-30350-050 Belo Horizonte, MG (BR).		(81) Designated States: AU, CA, CN, IL, IS, JP, KR, MX, NO, NZ, US, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>
(54) Title: NEW UTILIZATION OF ALPHA-HIDROXY-PROPIONIC ACID IN MEDICINE		
(57) Abstract <p>The present invention relates to a composition comprising alpha-hydroxy-propionic acid linked to any pharmaceutically acceptable vehicle, such as pure serum, 1,2,3-propanetriol, 1,2-propanediol resp. a mixture thereof or optionally a pharmaceutically acceptable catalyzer. Alpha-hydroxy-propionic acid is used in medicine in many dilutions for the treatment of sinusitis and other upper respiratory diseases. The present invention is characterized by a formulation adapted to nasal delivery for the treatment of upper respiratory disorders.</p>		

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EE	Estonia						

“NEW UTILIZATION OF ALPHA-HIDROXI-PROPIONIC ACID IN MEDICINE”

The present invention is relative to a compound made of alpha-hidroxi-propionic (or 2-hidroxi-propionic), (compound I), combined with 1,2,3-propanotriol pure (glicerín), or to the 1,2-propanodiol pure or serum, or to a balanced mixture of them or any other acceptable pharmaceutical vehicle, (compound II) to the attaining procedures of such a compound or to its utilization in Medicine.

The invention has got a compound consisted of the alpha-hidroxi-propionic acid (compound I), or to an acceptable pharmaceutical salt of the latter, or of an acceptable pharmaceutical solvato of the latter, or of an acceptable pharmaceutical catalyser of the latter, characterized by the following dilution of:

0,2 to 0,9ml, or 1,1 to 2,0ml, or 2,1 to 3,0ml, or 3,1 to 4,0 ml, or 4,1 to 5,0ml, or 5,1 to 6,0ml, or 6,1 to 10ml of compound I in 100ml of compound II; and 0,3 to 0,8 ml, or 0,4 to 0,7 ml, or 0,2 to 0,5ml, or 0,5 to 0,9 ml, or 1,1 to 1,5ml, or 1,5 to 2,0ml, or 2,1 to 3,0ml, or 3,1 to 4,0ml, or 4,1 to 5,0 ml or 5,1 to 10,0 ml of the active principle of compound I in 100ml of compound II.

Compound I, in one or more of the above-mentioned items combined with compound II is characterized by being suit to the intake in drops, via the nasal airways, or as a spraying solution, a spray, a microfine powder for insufflation or an acceptable pharmaceutical salt or an acceptable pharmaceutical solvate for the medicine addressed to the treatment of the highairways disturbances.

There aren't in the medical and pharmaceutical literatures any statements about the active principle of compound I. On the other hand, there isn't an efficient medicine for the sinusitis treatment. What has been recorded in medical literature so far is the antibiotics massification which, besides its high cost, represents one of the biggest threats to the world public health, due to the development of resistant “cepas” (germs).

It's to be pointed out that the antibiotics massification leads only to the

germs fight inside the organism or in its "doorway" when such disturbances are in acute crisis. During those crisis, the germs either in the nasal cavities or in the cheek bones located in external areas of the organism, in close contact with the external environment, aren't reached.

For a biologically active substance to carry out its duty, it's necessary to be positioned at the action location. The active principles are taken into the body through medicines. Therefore, it's necessary for them to be released in the location where the infectious agents are.

In fact, the antibiotic is a medicine for internal use and that's why it isn't efficient in the sinusitis treatment, taking into consideration that its release doesn't occur at the infection spot. As known, the sinusitis is an inflammation of the layer of the tissue that internally covers the cheek bones through little holes which communicate with the nasal cavity directly linked to the external environment.

As the application of compound I linked to compound II occurs at the nostrils, such a compound will work directly on the germs located in the nasal cavities and cheeks.

The first application effect in the nasal cavities and cheek bones of compound I linked to compound II is the "lisar" (dehydrating) of the germs that can be found there through its bactericide and bacteriostatic properties that are in contact .

After that, the hydrating and moistening effects of compound I linked to compound II, cause the increase in the nasal mucosa elasticity and its clearance. The action motion of the alpha-hidroxi-propionic acid keeps a more homogeneous cornea layer, decreasing the superficial cellular cohesion. Those alpha-hidroxi-propionic acids promote a subtle exfoliation, leaving the nasal mucosa smoother and more homogeneous.

As mediate effects, there are also the modifications of the medium pH, facilitating the "Lactobacillus acidophyllus" and the "Bifidobacteria" growth. The Bifidobacteria are known for displaying inhibiting effects upon many other

pathogenic germs, "in vitro" and "in vivo", such as "Candida albicans",
60 "Shighellas", "Clostridium", "Bacillus cereus", "Staphylococcus aureus", and
"Campylobacter jejuni", according to the researches of Aann and col. (1985), Tojo
and col. (1987), Tomoda and col. (1988).

It's known, as well, that the bifidobacteria in the large intestine
synthesize vitamins that are absorbed by the organism.

65 Bifidobacteria are still known for producing tiamine, riboflavine and
vitamins B6 and K. It's still proved that the bifidobacteria are able to synthesize the
complex B vitamins (Mutai, 1978).

In the cheek bones, the compound I linked to compound II changes the
medium pH, promoting the mucosa hydrating which will speed up the
70 bifidobacteria growth. The bifidobacteria, by competition, leaves out the
pathogenic bacteria found there, which are responsible for the cheek bones
infections. Then, the environmental adaptation to the new pH makes the cheek
bones prone to the bifidobacteria development, as it occurs in the intestines (Rassic
- 1989).

75 Well, similarly to the gastrointestinal tract, the respiratory system is open
to the external environment in order to facilitate the organism breathing. In fact,
the bifidobacteria and "Lactobacillus acidophyllus" growth in the cheek bones, is
possible due to the optimum pH, determined by the active principles of compound
I linked to compound II.

80 Researches believe that the bifidobacteria, by competition, leave out the
large intestines putrefying bacteria which are responsible for the free radicals
release. The free radicals, being absorbed, will do the organism a lot of harm, such
as early aging. (Metchnikoff, 1938 and Linnus Pauling, 1965)

Therefore, the "Lactobacillus acidophyllus" and Bifidobacteria
85 presences are beneficial to the cheek bones as well as to the intestines. One of the
Bifidobacteria effects as an effective pathogenic germ inhibitor is associated with
the production of lactats and acetats in small portions in the mechanism of

reaction in the chemical products resultant from the carbohydrates catabolism. Those elements and the pH inhibit the pathogenic bacteria growth. (Hughes, D.B., Hoover, D.G., BIFIDOBACTERIA, THEIR POTENTIAL FOR USE IN AMERICAN PRODUCTS).

The medicine utilization, represented by compound I linked to compound II is considered only by the otorhinolaryngologist clinics as a salutary alternative to the rhinitis and sinusitis treatment.

Carriers of such diseases feel considerable relief from the very first time they take the referred medicine.

The medicine, represented by compound I linked to compound II, has shown advantages upon any other medicine, for it isn't reabsorbed for being a product of cellular rejects.

At present, the sinusitis is treated with last generation antibiotics, not always with the desired results for not reaching the infection focus, which is inaccessible, and its massification leads to one of the biggest threats to the world public health due to the resistant "cepas" (germs) appearance _ what would justify this request at once.

The alpha-hidroxi-propionic acid utilization (compound I), linked to the 1,2,3-propanotriol or to the 1,2-propanodiol (compound II) in the sinusitis treatment, besides being a profitable alternative in the treatment of those diseases, will bring huge social and economic benefits to the country.

REQUESTS

1. **"NEW UTILIZATION OF THE ALPHA-HIDROXI-PROPIONIC ACID IN MEDICINE"**: characterized by a pharmaceutic compound, consisting of the alpha-hidroxi-propionic acid (compound I), or an acceptable pharmaceutic solution of the latter, linked to 1,2,3-propanotriol, or to 1,2-propanodiol, or to serum or any other acceptable pharmaceutic vehicle, (compound II), having in the composition the dilution of: 0,2 to 0,5ml, or 1,1 to 1,9ml, or 2,0 to 3,0ml, or 3,1 to 4,0ml, or 4,1 to 5,0ml, or 5,1 to 6,0ml, or 6,1 to 10ml of compound I in 100ml of compound II; and still 0,3 to 0,8ml, or 0,4 to 0,7ml or 0,5 to 0,9ml, or 1,1 to 1,9 ml, or 2,0 to 2,5ml, or 2,5 to 3,0ml, or 3,1 to 4,0ml, or 4,1 to 5,0ml or 5,1 to 10,0ml of the active principle of compound I in 100ml of compound II.

2. **"NEW UTILIZATION OF ALPHA-HIDROXI-PROPIONIC IN MEDICINE"**, according to request I, characterized by its utilization in the sinusitis and other highairways diseases.

3. **"NEW UTILIZATION OF ALPHA-HIDROXI-PROPIONIC IN MEDICINE"**, according to request I, characterized by its utilization in the human and veterinarian highairway treatment.

4. **"NEW UTILIZATION OF ALPHA-HIDROXI-PROPIONIC ACID IN MEDICINE"**, according to request I, characterized by its utilization as nasal releaser.

5. **"NEW UTILIZATION OF ALPHA-HIDROXI-PROPIONIC ACID IN MEDICINE"**, according to request I, characterized by its dilution in 100ml of 1,2,3-propanotriol (compound II).

6. **"NEW UTILIZATION OF ALPHA-HIDROXI-PROPIONIC ACID IN MEDICINE"**, according to request I, characterized by its utilization as a medication in the sinusitis and rhinitis treatment and as a clearing agent of the nasal cavities.

7. **"NEW UTILIZATION OF ALPHA-HIDROXI-PROPIONIC**

30 **ACID IN MEDICINE**", according to request I, characterized by its dilution in 100 ml of serum or any other acceptable pharmaceutic vehicle of the latter.

8. **"NEW UTILIZATION OF ALPHA-HIDROXI-PROPIONIC ACID IN MEDICINE"**, according to request I, characterized by its dilution in 100ml of serum or any other acceptable pharmaceutic vehicle of the latter.

35 9. **"NEW UTILIZATION OF ALPHA-HIDROXI-PROPIONIC ACID IN MEDICINE"**, according to request I, characterized bh the dilution in 10ml of 1,2-propanodiol (compound II).

40 10. **"NEW UTILIZATION OF THE ALPHA-HIDROXI-PROPIONIC ACID IN MEDICINE"**, according to request I, characterized by being adapted for intake in drops, via nasal airways, or in the form of a solution for spraying, or a spray, a microfine powder for insufflation or an acceptable pharmaceutic salt of the latter, or an acceptable pharmaceutic solvate of the latter, so that a medicine can be prepared to the treatment of human and veterinarian highairways disturbances.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/BR 99/00107

A. CLASSIFICATION OF SUBJECT MATTER

IPC⁷: A61K 31/191, 31/22, 9/08, 9/72

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC⁷: A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI, PAJ, EPODOC, medline, CAS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JP 62-11649 A (KOWA CO. LTD.) 02 August 1994 (02.08.94) (abstract) World Patent Index [online]. London, U.K.: Derwent Publications, Ltd. [retrieved on 05 April 2000 (05.04.00)]. Retrieved from EPOQUE, Accession No.1994-283256.	1-4,6-8,10
X	JP 63-170323 A (COSMO KAIHATSU KK) 14 July 1988 (14.07.88) (abstract) World Patent Index [online]. London, U.K.: Derwent Publications, Ltd. [retrieved on 05 April 2000 (05.04.00)]. Retrieved from EPOQUE, Accession No. 1998-238135.	1-3, 6-8,10
X	DE 2721014 A (REITH F.J.) 16 November 1978 (16.11.78), abstract, claims.	1-3,6-8,10

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents:

- „A“ document defining the general state of the art which is not considered to be of particular relevance
- „E“ earlier application or patent but published on or after the international filing date
- „L“ document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- „O“ document referring to an oral disclosure, use, exhibition or other means
- „P“ document published prior to the international filing date but later than the priority date claimed

- „T“ later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- „X“ document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- „Y“ document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- „&“ document member of the same patent family

Date of the actual completion of the international search

05 April 2000 (05.04.00)

Date of mailing of the international search report

17 April 2000 (17.04.00)

Name and mailing address of the ISA/AT

Austrian Patent Office
Kohlmarkt 8-10; A-1014 Vienna
Facsimile No. 1/53424/200

Authorized officer

Krenn

Telephone No. 1/53424/435

INTERNATIONAL SEARCH REPORT

International application No.
PCT/BR 99/00107

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: (please see remark)
because they relate to subject matter not required to be searched by this Authority, namely:
Remark:
Although the formulation "New utilization of ... in medicine ..." is quite imprecise and might involve therapeutic methods of treatment of the human/animal body, the search has been carried out for all claims and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This international Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.